

MULTI-CHANNEL DIGITAL FEEDBACK REDUCER SYSTEM

Abstract of the Invention

The present invention provides method and apparatus that improve processing of acoustic signals by reducing acoustic feedback in an acoustic system. An aspect of the invention is a multi-channel digital feedback reducer (DFR) system that comprises a plurality of channel elements. Each channel element comprises a notch filter configuration having an adaptive notch filter and an operative notch filter. The operative notch filter processes a signal received from an acoustic input device and provides the processed signal to an acoustic output device, in which acoustic feedback between the acoustic input device and the acoustic output device is ameliorated. If acoustic feedback is detected by a channel element, the channel element informs other channel elements of the multi-channel DFR system about the detected feedback to ensure that all channel elements may incorporate the same notch filters. During the notification, the other channel elements may continue searching for feedback on the associated channels.